DETAILED ACTION

This action is in response to an amendment filed on September 25, 2009 for the application of Vasudevan et al., for a "Transaction transfer during a failover of a cluster controller" filed December 8, 2003.

Claims 1, 3-7, 9-15, and 17-20 are pending in the application.

Claims 1, 3, 4, 7, 9, 10, 14, 17, and 18 have been amended.

Claims 2, 8, and 16 have been cancelled.

Claims 1, 3-7, 9-15, and 17-20 are rejected under 35 USC § 103.

Claim Objections

Applicant is advised that should claim 12 be found allowable, claim 13 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 3-7, 9-15, and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meyer et al. (U.S. PGPUB No. 20020188711) in view of Johnson et al. (U.S. PGPUB No. 20040225915).

As per claim 1, Meyer discloses a method for failover in a cluster having two or more servers, the two or more servers operative with each other by a heartbeat mechanism comprising:

detecting a failure of a first server of the two or more servers, wherein detecting comprises detecting a failure via the heartbeat mechanism ([0160]);

transferring a transaction queue from the first server to a second server of the two or more servers after detecting the failure of the first server; and servicing the transactions of the transaction queue of the first server by the second server ([0181]);

Meyer fails to explicitly disclose duplexing a transaction queue.

Johnson teaches:

duplexing, at a predetermined time interval, a transaction queue of a first server of the two or more servers to a shared storage device ([0046]), wherein the shared

storage device is communicatively coupled to at least two of the two or more servers, ([0047]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the server takeover system of Johnson in combination with the cluster failover system of Meyer to provide a highly available system.

One of ordinary skill in the art at the time of the invention would have been motivated to make the combination because both inventions disclose a method and system for a failover (Meyer, Abstract) and (Johnson, [0030]). Meyer discloses transferring services from one node to another ([0181]). Johnson discloses transferring transactions by resource management pair ([0046]).

As per claim 3, Meyer discloses the failure is an unstable application ([0109]).

As per claim 4, Meyer discloses the failure is a data path ([0397]).

As per claim 5, Meyer discloses forwarding the transaction queue from the first server to the second server via the heartbeat mechanism ([0181], [0435]).

As per claim 6, Meyer discloses forwarding the transaction queue from the first server to the second server via a network of the cluster ([0034], [0046]).

As per claim 7, Meyer discloses a method for failover of a sever in a cluster having two or more servers, the two or more servers operative with each other by a heartbeat mechanism, comprising:

detecting a failure of a first server of the two or more servers, wherein detecting comprises detecting a failure via the heartbeat mechanism ([0160]);

transferring a transaction queue from the first server to a second server of the two or more servers after detecting the failure of the first server; and servicing the transactions of the transaction queue of the first server by the second server ([0181]);

Meyer fails to explicitly disclose duplexing a transaction queue.

Johnson teaches:

duplexing, at a predetermined time interval, a transaction queue of a first server of the two or more servers to a shared storage device ([0046]), wherein the shared storage device is communicatively coupled to at least two of the two or more servers, ([0047]).

As per claim 9, Meyer discloses the failure is an unstable application ([0109]).

As per claim 10, Meyer discloses the failure is a data path ([0397]).

As per claim 11, Meyer discloses forwarding the transaction queue from the first server to the second server via a network of the cluster ([0181]).

As per claim 12, Meyer discloses servicing the transactions of the transaction queue of the first server by the second server occurs without waiting until the transactions timeout ([0110]).

As per claim 13, Meyer discloses servicing the transactions of the transaction queue of the first server by the second server occurs without waiting until the transactions timeout ([0110]).

As per claim 14, Meyer discloses a method for failover in a cluster having two or more servers, the two or more servers operative with each other by a heartbeat mechanism comprising:

detecting a failure of a first server of the two or more servers, wherein detecting comprises detecting a failure via the heartbeat mechanism ([0160]);

transferring a transaction queue from the first server to a second server of the two or more servers after detecting the failure of the first server; and servicing the transactions of the transaction queue of the first server by the second server ([0181]);

Meyer fails to explicitly disclose duplexing a transaction queue.

Johnson teaches:

duplexing, at a predetermined time interval, a transaction queue of a first server of the two or more servers to a shared storage device ([0046]), wherein the shared storage device is communicatively coupled to at least two of the two or more servers, ([0047]).

As per claim 15, Meyer discloses transferring a transaction queue from the first server to the remaining servers of the two or more servers comprises transferring one or more selected portions of the transaction queue to one or more of the remaining servers ([0181], [0110]).

As per claim 17, Meyer discloses the failure is an unstable application ([0109]).

As per claim 18, Meyer discloses the failure is a data path ([0397]).

As per claim 19, Meyer discloses forwarding the transaction queue from the first server to the remaining servers of the two or more servers via the heartbeat mechanism ([0181], [0435]).

As per claim 20, Meyer discloses servicing the transactions of the transaction queue of the first server by the second server occurs without waiting until the transactions timeout ([0110]).

Response to Arguments

Applicant's arguments with respect to claims 1, 7, and 14 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1 .136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1 .136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elmira Mehrmanesh whose telephone number is (571) 272-5531. The examiner can normally be reached on 8-5 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert W. Beausoliel can be reached on (571) 272-3645. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Robert W. Beausoliel, Jr./
Supervisory Patent Examiner, Art Unit 2113